

## ABSTRACT

In a fiber optic gyroscope comprising a light source, a fiber optic coupler, an optical integrated circuit having a function of a polarizer and a branching optical waveguide, and a fiber optic coil, and detecting an angular velocity applied to the fiber optic coil about the axis thereof, a polarization maintaining optical fiber having its length  $L$  is connected to an input/output end of the optical integrated circuit nearer the light source in an optical system of optical fiber from the light source to the optical integrated circuit, the polarization maintaining optical fiber of its length  $L$  resulting in a difference in group delay time between the orthogonal two polarization modes and the difference at least exceeding a coherence length of light from the light source. An optical system of optical fiber from the light source to the optical integrated circuit except for the polarization maintaining optical fiber of its length  $L$  is formed by a single mode optical fiber, and the fiber optic coupler is formed by a single mode optical fiber.